

CLAIMS

What is claimed is:

1. A method of treating a condition which is ameliorated  
5 by inhibiting or decreasing serine protease activity of  
matriptase or MTSP1 in a mammal in need of treatment which  
comprises administering to said mammal a therapeutically  
effective amount of a compound which inhibits serine protease  
activity of matriptase or MTSP1.

2. A method according to claim 1 wherein said compound  
has an  $IC_{50}$  of 100 nM or less.

3. A method according to claim 1 wherein said compound is  
selected from the compounds depicted in Figures 1A, 1B and 1C.

4. A method of treating a condition which is ameliorated  
by inhibiting or decreasing serine protease activity of  
matriptase or MTSP1 in a mammal in need of treatment which  
comprises administering to said mammal a therapeutically  
effective amount of a compound which selectively inhibits serine  
protease activity of matriptase or MTSP1.

5. A method according to claim 4 wherein said compound  
has an  $IC_{50}$  of 100 nM or less.

6. Compound No. 6 of Figure 1A.

7. Compound No. 4 of Figure 1A.

8. A method of detecting a compound that inhibits serine protease activity of matriptase or MTSP1 which comprises contacting said compound with a peptide comprising a recombinant serine protease domain derived from matriptase or MTSP1 and a substrate and measuring substrate hydrolysis.

9. A method according to claim 8 wherein said serine protease domain comprises SEQ. ID. NO. 2.

10. A method of screening for a compound having activity in inhibiting serine protease activity of matriptase or MTSP1 which comprises determining whether said compound inhibits serine protease activity of a peptide comprising a recombinant serine protease domain derived from matriptase or MTSP1.

11. A method according to claim 10 wherein said peptide comprises SEQ. ID. NO. 2 or an amino acid sequence having serine protease activity and at least about 80% sequence identity to SEQ. ID. NO. 2.

12. A method of screening a compound for activity in inhibiting serine protease activity of matriptase or MTSP1 which comprises determining whether said compound inhibits serine protease activity of a peptide comprising a recombinant serine protease domain comprising SEQ. ID. NO. 2 or an amino acid sequence having serine protease activity and at least about 80% sequence identity to SEQ. ID. NO. 2.

13. A recombinant serine protease domain derived from matriptase or MTSP1 which comprises SEQ. ID. NO. 2 or an amino acid sequence having serine protease activity and at least about 80% sequence identity to SEQ. ID. NO. 2.

14. A recombinant serine protease domain which comprises  
SEQ. ID. NO. 2.

5 15. A recombinant serine protease domain which comprises  
SEQ. ID. NO. 2 or an amino acid sequence having serine protease  
activity and at least about 80% sequence identity to SEQ. ID.  
NO. 2.

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